THE PENDING CLAIMS:

1. (Previously Presented): A charged-particle beam irradiator comprising: a plurality of scan electromagnets for one direction provided on an entrance side of a final deflection electromagnet to scan a charged-particle beam to expand an irradiation field, and

a controller controlling the plurality of said scan electromagnets so that kicks provided by the plurality of said scan electromagnets are combined in said one direction to form a collimated irradiation field at an exit of said final deflection electromagnet.

2. (Previously Presented): A charged-particle beam irradiator according to claim 1, wherein said plurality of scan electromagnets are controlled according to following equation.

$$a_{11}(s_1) \bullet X_1' + a_{11}(s_2) \bullet X_2' + \cdots + a_{11}(s_n) \bullet X_n' = 0$$

where, n: number of the electromagnets.

$s_1 \ldots s_n$: distance from each electromagnet to beam irradiated position

$a_{11}(s)$: coefficient of beam transport matrix

X': beam divergence at the beam irradiated position

3. (Original): A charged-particle beam irradiator according to claim 1 or 2, wherein said plurality of scan electromagnets are interposed between said final deflection electromagnet and a deflection electromagnet disposed on an entrance thereof.

4. (Previously Presented): A charged-particle beam irradiator according to claims 1 or 2, wherein said plurality of scan electromagnets are disposed upstream from a deflection electromagnet disposed at an entrance of said final deflection electromagnet.

5. (Original): A charged-particle beam irradiator according to claim 1 or 2, wherein said plurality of scan electromagnets are disposed independent of each other in X and Y directions.

6. (Previously Presented): A therapy system, comprising:

a charged-particle beam irradiator, having a plurality of scan electromagnets for one direction provided on an entrance side of a final deflection electromagnet, to scan a charged-particle beam to expand an irradiation field, and a controller controlling the plurality of said scan electromagnets so that kicks provided by the plurality of said scan electromagnets are combined in said one direction to form a collimated irradiation field at an exit of a final deflection electromagnet to irradiate an affected part with a charged-particle beam.

7. (Previously Presented): A charged-particle beam irradiator for allowing a scan electromagnet provided on an entrance side of a final deflection electromagnet to scan a charged-particle beam to expand an irradiation field, said charged-particle beam irradiator, comprising:

a plurality of said scan electromagnets, wherein

kicks provided by the plurality of said scan electromagnets are superimposed to form a collimated irradiation field at an exit of said final deflection electromagnet,

wherein said plurality of scan electromagnets are arranged according to following equation.

$$a_{11}(s_1) \bullet X_1' + a_{11}(s_2) \bullet X_2' + \cdots + a_{11}(s_n) \bullet X_n' = 0$$

where, n: number of the electromagnets.

$s_1 \ldots s_n$: distance from each electromagnet to beam irradiated position

$a_{11}(s)$: coefficient of beam transport matrix

X': beam divergence at the beam irradiated position

8. (Previously Presented): The charged-particle beam irradiator according to claim 7, wherein said plurality of scan electromagnets are interposed between said final deflection electromagnet and a deflection electromagnet disposed on an entrance thereof.

9. (Previously Presented): The charged-particle beam irradiator according to claim 8, wherein said plurality of scan electromagnets are disposed upstream from said deflection electromagnet at an entrance thereof.

10. (Previously Presented): The charged-particle beam irradiator according to claim 7, wherein said plurality of scan electromagnets are disposed independent of each other in X and Y directions.